Carrier Aviation’s Applicability in the New World Order

CSC 1994

SUBJECT AREA-Aviation

## EXECUTIVE SUMMARY

Title: Carrier Aviation's Applicability in the New World Order

Author: Lieutenant Commander R.R. Garcia, United States Navy

Thesis: The New World Order and the current fiscal domestic limitations portend significant implications for the utilization of Carrier Aviation as we approach the 21st Century.

Background: The United States' emerging national security strategy is evolving in an environment dominated by the uncertainties of the New World Order and a national fiscal consensus that focus's on the domestic well-being of the nation. This environment has resulted in a reduced aircraft carrier force structure that no longer provides for the capability to maintain a traditional naval presence that has served as the nation's linchpin of maintaining forward presence and crisis response. Dwarfing this significant development is a concurrent lack of aircraft procurement, that fails to ensure a sufficient number of aircraft are available to fill the flight decks of a reduced aircraft carrier force structure, nor provides for the development or introduction of a modernized follow-on tactical aircraft to replace this dwindling number of aircraft anytime within the foreseeable future.

Recommendation: Naval planners need to recognize the indisputable changes that will begin to degrade the contributions of carrier aviation in the next ten years. An alternative force structure involving other organic naval components including Surface Actions Groups, and Amphibious Readiness Groups must be incorporated to complement or supplement carrier forces in meeting the national security interests of the nation. A further emphasis must be placed on the sharing of responsibility for maintaining regional stability with those nations who possess both a vested interest and a credible military capability that will serve to mitigate the necessity for maintaining and deploying the traditional level of aircraft carrier presence, that the current carrier force structure no longer provides.

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **1994** | | **00-00-1994 to 00-00-1994** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **Carrier Aviation?s Applicability in the New World Order** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)<br>**Marine Corps War College,Marines Corps University,Marines Corps Combat Development Command,Quantico,VA,22134-5067** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **Same as Report (SAR)** | **20** | |

# CARRIER AVIATION APPLICABILITY IN THE NEW WORLD ORDER

Thesis statement: The New World Order and the current fiscal domestic limitations portend significant implications for the utilization of Carrier Aviation as we approach the 21st Century.

I. Overview

- A. Broad changes loom on the horizon in discerning the U.S. role in the New World Order.
- B. Naval role of "showing the flag" uses significant forces exacerbated by a reduced aircraft carrier force structure.

II. The New World Disorder

- A. Ethnic, religious, and political volatility dominate the evolving international scene.
- B. Aircraft carriers have provided an ideal medium with which to meet the security interests of the nation.
- C. Domestic fiscal environment significantly impacts and determines capability to meet military commitments.

III. Impact of Aircraft Carrier Force Reductions

- A. Current aircraft carrier force structure no longer provides for traditional naval presence.
- B. Over the previous two years, "gaping" the Naval presence of carrier forces has occurred in the Mediterranean Sea and Indian Ocean.

IV. Carrier Aircraft, the other half of the problem

- A. Block obsolescence of carrier aircraft will significantly impact carrier fleet in the late 1990's.
- B. Aircraft procurement schedule fails to maintain sufficient aircraft to man current and projected aircraft carrier decks.

C. Development programs have failed to successfully field a single new modernized aircraft after spending billions of dollars.

V. Conclusions

A. The responsibility for international stability should be shared with allied nations with a vested interest and credible military capability.

B. Fiscal constraints and money savings will not provide any significant enhancements of the current aircraft carrier force structure or the aircraft on the flight deck.

C. Other organic naval units should be constituted to complement carrier forces in meeting the security interests of the nation when appropriate.

D. Evolving technology and fiscal constraints portends the degradation and ultimate end of carrier aviation.

# CARRIER AVIATION'S APPLICABILITY IN THE NEW WORLD ORDER

## OVERVIEW

There has been nothing short of epoch making changes occurring across the entire spectrum of international relations in the past few years. Across the globe, alterations in the balance of regional powers involving military, economic, and leadership roles are evolving at an unprecedented rate. Changes that would have once taken years to develop are reaching fruition in as many months or even weeks. The implication for nations as they conduct international relations and exercise their elements of power, is that assumptions used to conduct these relations must be re-evaluated to discern their applicability in the New World Order.

As the United States begins this re-evaluation process, they must do so in the context of an evolving national consensus dominated by concerns for the domestic economic well-being of the nation. This change in focus and priority with it's inherent fiscal limitations, magnifies the challenge of meeting the goals established by the national security policy. The challenges become even greater and the situation more convoluted, as each element of our nation's power

develops it's policies to support the vital interests identified in a national security strategy, that one year into the present administration has yet to be published.

Perhaps the armed force facing the greatest change to its traditional foundation of power, mission assignment, and conduct of warfare is the United States Navy. Political, economic and joint/combined warfare initiatives are striking at the traditions of a maritime nation, whose security has and will continue to rest on naval forces. While some aspects of the Navy's mission, particularly it's contribution to the nuclear triad in the form of ballistic missile submarines remains intact, the Navy's aircraft carrier fleet long the centerpiece in protecting the vital interests of the nation, is encountering a painful metamorphosis. Maintaining a forward presence and "showing the flag" the basic nature of peacetime naval operations, has always demanded a tasking level in excess of our capability to provide forces. As our maritime strategy evolves from a global view involving superpower confrontation to a more regional threat basis, the challenge of today's naval leadership will be to somehow meet the increasing demands associated with the New World Order in an environment dominated by reduced force structures, aging aircraft and ships, and the increasing technological sophistication of regional belligerents. The unfortunate reality is that the traditional naval presence involving three concurrent aircraft carriers deployments, with one in the

Mediterranean, another in the Western Pacific, and a third in the Indian Oceans, in addition to the principles involving their tactical employment, are driven more by the limitations of our capacities than by the necessity of meeting a national military strategy.

## THE NEW WORLD DISORDER

The implications of an international environment dominated by ethnic, religious and political volatility as it applies to the deployment and conduct of fleet operations are enormous. Century old conflicts between nations and ethnic rivalries largely held in check by the stabilizing influence of a bipolar super-power structure, threaten to emerge as violent regional confrontations. This evolving international scenario stands in contradiction to the National Security Strategy of the United States which has established global and regional stability as a national interest thus requiring a capability by our military forces to reduce the sources of instability and violence.[1]

The challenge of meeting this multitude of contingencies is further exacerbated by the proliferation of high tech weapons including sophisticated mines, submarines, and the availability of conventional weapons and aircraft associated

with the dissolution of the former Soviet Union, that can easily elevate a third world country to a first rate threat. Nuclear, chemical and biological capabilities are becoming more accessible to less developed nations who continue to obtain once considered high-technology weapons in the form of SCUD and FROG tactical missile systems, that provide a more than credible power projection capability to disrupt regional stability and vital lines of communication.[2]

The scope of this instability exists in virtually every corner of the globe and portends a renewed emphasis by naval forces to support the fundamental elements of our national defense strategy. Of the four elements that constitute our national defense; (strategic deterrence and defense, forward presence, crisis response, and reconstitution); the conduct of naval strategy by aircraft carrier battle groups have aptly met the two requirements of forward presence and crisis response. The versatility inherent in the CVBG (Carrier Battle Group) are relatively self-evident in regards to forward presence and crisis response, and stem from advantages not found in any of the other services. It is a testament in fact borne out by the 52 responses of carrier battle groups to world crisis in the period from 1974 to l990.[3] The utilization of these forces centers around their attributes of:

"-Complete independence from foreign basing agreements and host nation support. Airborne forces can operate freely in

international airspace without requesting cumbersome overflight rights.

-Ability to remain on station indefinitely. On the scene with credible power projection capability on a moment's notice.

-Logistics capability integral to the force.

-Ability to respond and remain over the horizon, a necessity not to provoke world interest while still ready to strike.

-Provides decision makers the option of influencing events without committing forces to combat."[4]

These advantages long enjoyed by carrier forces remain valid today and have not been altered in the context of meeting the new demands of an emerging New World Order. The challenge for naval operations and strategy however, lies not in discerning the applicability of carrier forces in meeting the world's divergent demands, but in ascertaining the quantitative capability to do so in .a fiscal environment that will result in a reduction of force structure in the form of fewer CVBGs, and perhaps even more importantly, an insufficient number of aircraft to even fill their flight decks.

## IMPACT OF FORCE REDUCTIONS

The number of aircraft carriers encompassing today's fleet has been a significant focus of Naval planners and a

logical target in the effort to reduce defense expenditures. This stems not only from the initial costs of funding the construction of the multitude of naval vessels and aircraft that normally constitute a carrier battle group, but also from the extensive operating and maintenance costs that easily exceed $750 million per year per CVBG whether it deploys or not.[5] Consequently in order to save defense dollars reduced utilization of carrier assets is generally not the answer, but rather resides in the complete elimination of a carrier battle group.

With this in mind, the current carrier force structure has decreased from a total carrier force in 1992 of 14, to a force of 11 active carriers and one reserve/training carrier based on the retirements of USS Forrestal (CV-59), USS Saratoga (CV-60) (currently on her last deployment), and USS Ranger(CV-61).

The current aircraft carrier procurement program includes the completion of two more Nimitz-class carriers scheduled for delivery by FY 1998, with funding for an additional carrier (CVN-76) to begin construction in FY 1995.[6] This construction schedule would provide for the availability of eleven aircraft carriers plus a training carrier as conventional aircraft carriers are retired including USS Independence (CV-62) and USS America (CV-66).

The implication of this carrier force structure is that the conventional wisdom of maintaining three carrier battle

groups at sea with one in the Indian Ocean, another in the Western Pacific, and yet another in the Mediterranean is no longer possible. Based on a relatively conservative estimate that in this author's opinion slightly exaggerates the need for an increased aircraft carrier force structure, a report to congress conducted in 1991 by Ronald O'Rourke took into account factors including perstempo, overhaul, and transit times to demonstrate that the number of carriers necessary to maintain a constant presence in the three "traditional" theaters of forward presence was well in excess of the conventional estimate of having three on hand carriers in order to ensure the constant deployment of one. Despite the proclivity to overestimate the number of aircraft carriers necessary to maintain this traditional naval presence, the numbers derived were "in the ballpark" and resulted in the Navy testifying "that 5 carriers are required to keep one continuously deployed in the Mediterranean, another 1.7 carriers are required to keep one continuously deployed in the West Pacific, and another 7.6 carriers are required to keep one continuously deployed in the Indian Ocean--a total of 14.3 aircraft carriers for all three areas."[7] (The 1.7 carriers for the western Pacific is predicated on a forward based aircraft carrier in Japan currently the USS Independence CV-62)

As a result, the current aircraft carrier force structure involving twelve aircraft carriers (eleven for Fleet use and

one as a training carrier) does not provide a sufficient number of aircraft carriers necessary to maintain the before mentioned traditional naval presence and perhaps more importantly, mitigates the capability for these force to respond as rapidly to developing real world crisis. In fact, during the period of time since 1992 when the Navy possessed 14 aircraft carriers for fleet use to today's reduced aircraft carrier infrastructure, periodic gaps in aircraft carrier deployments have begun making themselves evident. These gaps in deployment coverage have occurred to a limited degree in the Mediterranean, and to a larger extent in the Indian Ocean and have necessitated the occasional transit of a carrier battle group through the Suez canal in order to depict a naval presence commensurate with our previous capabilities.

## CARRIER AIRCRAFT THE OTHER HALF OF THE PROBLEM

While the focus of factors influencing the future of carrier aviation would seem to reside in the number of aircraft carriers available and the emerging instability of the new world order, an insidious but equally troubling development is driving the future of carrier employment. A massive block obsolescence involving the tactical aircraft employed aboard ship is riding on a bow wave that will strike the Fleet in the late 1990's and early twenty first century. The F-14 fighter, the F/A strike-fighter, the A-6 Medium--attack aircraft, and the E-2C Hawkeye early warning aircraft

communities each envision an acute shortage of operational airframes in the future.

The anticipated E-2C aircraft shortfall is so significant for example, that some of the current operational aircraft are being placed in preservation now in order that they maybe re-introduced into the Fleet at a later date in order to extend their availability. This in conjunction with the re-opening of the E-2C production line is being conducted to mitigate the shortage of this aircraft, but represents just the "tip of the iceberg" in regards to anticipated aircraft shortages.

The dilemma for all of the aircraft communities is a two fold problem that revolves around; the replacement of aircraft lost to attrition by accident and expiration of service life; and the development of follow-on aircraft needed to modernize the current dwindling force structure. This situation is exacerbated not only by a reduction in aviation procurement funds that has been falling since a 1982 high of 13 percent of the Navy's total obligation authority, but the real impact is evolving from a failure to successfully field a single new modernized aircraft after spending billions of dollars on a variety of development programs.[8]

Aircraft procurement of today's carrier tactical aircraft models will provide the first shock wave in the degradation of carrier aviation. Scope and classification of this document preclude a precise enumeration of the type, number, and attrition rates associated with carrier tactical aircraft. But

even a superficial review of aircraft procurement involving the number of aircraft needed to support our current aircraft carrier force structure, and the constantly changing "buy rates" for these aircraft, portends a disparity whose magnitude defies description. A broad generalization representing the extent of this shortfall would be on the order of a procurement rate of 10 to 20 percent of that required to successfully man our current reduced aircraft carrier force structure.

This appalling procurement outlook is regrettably rivaled by the lack of a discernable modernization program capable of providing a state of the art follow-on aircraft for any one of the current aging carrier tactical aircraft. In this regard the largest failure was the cancellation of the A-12 Avenger program, a replacement for the 25 year-old A-6E, that was naval aviation's highest priority until cost overruns and rumors of mismanagement killed the project. Other programs that have taken irreplaceable development costs and even more precious time; include the Naval Advanced Tactical Fighter, designed to replace the F-14 Tomcat, and the Advanced Tactical Support Aircraft, a follow-on aircraft to replace the E-2C, EA-GB, and S-3A aircraft.[9]

As a result, carrier tactical aircraft development is precariously falling behind a schedule needed to maintain a credible replacement capability for even the reduced carrier structure envisioned in the future. The most advanced

procurement impetus appears to be the modification of the F/A-18 aircraft to provide increased payload and range in it's E/F versions, while the AX program designed to replace the A-6E, and the Advanced Tactical Support Aircraft envisioned to succeed the E-2C, EA6-B, and S-3 aircraft have floundered before they were even able to get off the ground. As a result, the retirement of the A-6 must be dealt with the less than satisfactory solution of relying on multimission aircraft, which in large measure will involve the F/A 18 E/F aircraft.

## CONCLUSIONS

In discerning the future of carrier aviation in light of; inherent international instabilities, the developing technological sophistication of third world belligerents, a consensus to prioritize the economic well-being of the nation, reduced infrastructure in the form of less personnel, ships and aircraft, a broad spectrum of alternatives and solutions must intelligently be brought to bear in order to mitigate our recognizable shortfalls and draw from our strengths. The nature of any solution however must recognize the inherent degradation of carrier aviation as we now know it today and must blend this aspect into whatever design is developed to maintain our national security.

Given that future conflicts are more than likely to develop in areas and regions previously thought to be benign

or relatively inconsequential to the balance of world power, the traditional concepts that have guided the deployment of carrier forces must certainly be revised . This change in concept may be best reflected in the movement away from the inquiry of “Where are the carriers?” The answer may be more frequently answered by a “no” based on the political necessity of conducting combined operations with nations in close proximity to the region of conflict and who may very well possess a credible military capability. Certainly the Navy must reassess its goals and in large measure already has redirected its priorities to the conduct of joint and combined operations. The magnitude of the paradigm shift in international relations demands a level of combined training and experience that will allow and in some cases demand the effective utilization of allied military capabilities. Carrier aviation once the nearly exclusive capability of the U.S. Navy has become resident in an increasing number of allied/friendly nations. While their combat effectiveness may not match the sophistication and combat projection capability of a much more practiced and experience U.S. Fleet, the issue is the applicability of their credible combat power together with their willingness and responsibility to share in the burden of maintaining regional stability.

This sharing and shifting where possible would help to mitigate the block obsolescence of naval aircraft and reduced

aircraft carrier infrastructure that has precluded and will continue to exacerbate our capability to maintain a traditional three aircraft carrier deployment level. While vastly changing fiscal imperatives have prevented an effective analysis as to the number of carrier tactical aircraft that will be available in the future, this more than anything will determine the number of carriers capable of simultaneous deployment. While the capability to surge aircraft carriers in support of a world crisis may still be on the order of 4 to 6 carriers, the impact that this will have on future operations immediately follow, the resolution of a conflict would certainly be crippling.

In the continual review of options, money saving initiatives regarding aircraft carrier operations should not be considered to serve as a panacea that could in some way improve their availability and longevity in the conduct of U.S. security policy. Some have ascertained that the cost reduction involved in operating and maintaining like designed aircraft carriers on the order of the Nimitz class would allow for a more aggressive utilization of a reduced aircraft carrier force structure that closely approximate a level of presence and responsiveness commensurate with the last twenty years. Clearly this piece of the puzzle fails to recognize the more significant implications and impact of the dwindling availability of carrier tactical aircraft. Naval planners must realistically address the fact that the limiting factor of

future aircraft availability is a fiscal problem without solution, and will in the current, austere financial environment only get worse instead of better.

Finally, and perhaps most significantly, Naval planners may have to adjust themselves to the reliance of other organic naval forces to serve in the capacity normally served by today's carrier fleet. With the advent of the technological capability of the Aegis missile cruiser and the introduction of the Tomahawk Land attack Missile onto many of our current surface and subsurface units, the capability to project power ashore with a surgical precision long deemed only possible by an aircraft carrier's airwing, now credibly resides in Surface Action Groups (SAG) that can more economically fit the bill. This shift in who or what conducts our naval strategy may not appear quite as profound as it seems. Since the concept may be as simple as utilizing surface combatants as small "aircraft carriers" for an airwing comprised of small but effective self guided munitions. The challenge will be for naval planners to intelligently discern not just the differences in capability between a SAG and a CVBG, but more importantly, the applicability that one may have over another in meeting the dynamic demands of our national security.

Much of the same guidance can also be used in integrating amphibious readiness groups (ARG) to provide the same type of supplemental combat power whose applicability make also provide distinct advantages over a heavy reliance of carrier

forces. This is certainly easier said than done and many mistakes will be made in discerning the correct force mix/structure that could apply to a given international crisis. But the fiscal realities and inevitable erosion of carrier aviation's capabilities over the next few years will dictate that this initiative continue with a vigor sufficient to meet the emerging challenging of the New World Order.

As technological progress continues its forward progress in quantum leaps and bounds, warfare will inevitably take paths never before envisioned or imagined. Carrier aviation's vital role in support of our national security needs are certainly not over yet, but one could easily argue that the era that began with aircraft carriers developing as the premier naval asset in World War II is in it's twilight of applicability. As presumptuous as it may sound, carrier aviation will soon be consumed by the constraints of a national consensus driven by other imperatives, and overshadowed by a developing global technological sophistication that will one day (perhaps sooner than we think) relegate it to the same status as the crossbow and hammer.

ENDNOTES

1. President George Bush, "National Security Strategy of the United States", (The White House, January 1993) p. 3.

2. Commander William Trotter, "The Future of Carrier Aviation", (Naval War College Newport, R.I., May 19920, p. 12.

3. Ibid., p. 37.

4. Lieutenant Commander John K. Stuart, "Fleet Flexibility: Exploiting Aircraft Carrier and Amphibious Ships Assets to meet US Naval Commitments into the 21st Century", (Naval War College, Newport, R.I., 13 Feb 1992), p. 9.

5. Commander William Trotter, p. 87.

6. Les Aspin, "Annual report to the President and the Congress", (Department of Defense, Jan 1994), p. 171.

7. Commander William Trotter, p. 105.

8. LTCOL James M. Durham USMC, "CV TACAIR 2010. Carrier Aviation facing Fiscal Reality", (Naval War College, Newport, R.I., 21 June 1991), p. 2.

9. Commander William Trotter, p. 72.

# BIBLIOGRAPHY


Aspin, Les, "Annual Report to the President and the Congress", Department of Defense, January 1994.

Bush, George, "National Security Strategy of the United States", The White House, January 1993.

Dunaway, William Michael, "Gunboat Diplomacy in a New World Order: Strategic Considerations for U.S. Naval Intervention in the Twenty-First Century", The Fletcher School of Law and Diplomacy, Medford, Massachusetts, 23 April 1991.

Durham, James M., "CV Tacair 2010 Carrier Aviation facing fiscal reality", Naval War College, NewPort, R.I., 21 June 1991.

Goodwin, Robert A. and Shuford, Jacob L., "U.S. Naval Doctrine in a Changing Security Environment", Naval War College, Newport, R.I., 12 September 1991.

Stuart, John K. Jr., "Fleet Flexibility: Exploiting Aircraft Carrier and Amphibious Ship Assets to meet US Naval Commitments in to the 21st Century", Naval War College, Newport, R.I., 13 February 1992.

Trotter, Thomas William, "The Future of Carrier Aviation", Naval War College, Newport, R.I., May 1992.

Withers, J.D., "In Harms Way: Carrier Battle Group Operations Inside The Persian Gulf", Naval War College, Newport, R.I., 13 March 1991.